Amendments to the Claims

Claim 1 (cu tly amended): A variable optical attenuator for attenuating optical s als transmitted from an input fiber to an output fiber, comprising:

a rotatable me anism between the input fiber and the output fiber; and

a refractor m nted on and being rotatable with the rotatable mechanism which is ven to deflect light beams from the input optical fiber and then to cou part of the light beams into the output fiber, the refractor being rotata to different angles to change the incident angle of the input light bea and then to output refracted light beams that are deflected from the a of the input light beams as determined by the incident angle to co uously change the amount of the light beams entering into the outp iber.

Claim 2 (curren amended): The variable optical attenuator as claimed in claim 1, rther comprising two ~~collimators~~ ferrules for containing the input fi and the output fiber, respectively.

Claim 3 (origin The variable optical attenuator as claimed in claim 1, wherein the r table mechanism comprises a fixing block and a rotatable post extendir rom the bottom of the fixing block.

Claim 4 (curren amended): The variable optical attenuator as claimed in claim 1, f ner comprising a holder to rotatablely hold the rotatable mechanism a hold the two collimators in alignment with each other.

Claim 5 (origina The variable optical attenuator as claimed in claim 1, wherein the re ctor is a lens.

Claim 6 (origina The variable optical attenuator as claimed in claim 5, wherein the re ctor has two parallel surfaces.

Claim 7 (original): The va ible optical attenuator as claimed in claim 6, wherein the refractor l anti-reflective coatings covering the two parallel surfaces.

Claim 8 (original): A varia e optical attenuator comprising:

an input port and an out t port facing to each other along an axial direction, said input port inc ding an input GRIN lens and an input ferrule, said output port includir an output GRIN lens and an output ferrule;

a refractor positioned betv n said input port and said output port, said refractor being rotatable ab t an axis perpendicular to said axial direction; wherein

when said refractor exten perpendicular to said axial direction, light from the input GRIN lens p trates said refractor and substantially fully enters the output GRIN le while when said refractor is tilted relative to the axial direction wit herebetween an angle different from ninety degrees, attenuation occurs

Claim 9 (currently amende The attenuator as claimed in claim 8, wherein said attenuation f ows a formula as follows:

Attenuation=-10logη, where$\eta$is l ral displacement effect between an axis of the input beam and an ax of the output beam, given by$\eta = 2\times$

$\cos^{-1}(d/a)/\pi - d\times SQRT\ [1-(d/2a)^2$ πa and $d = h\times\sin\ [\theta - \sin^{-1}(\sin\theta/n)]$ /cos $[\sin^{-1}(\sin\theta/n))$, wherein

θ is an incident angle for a nput beam from the input GRIN lens with regard to the refractor;

n is an index of refraction;

d is a lateral deflection relative t. the axis of the input beam;

a is a core radius of an optic fibe: used in the attenuator; and

h is a thickness of the refractor.

Claim 10 (new): A variable optic l attenuator comprising:

an input port;

an output port;

a holder coaxially fixing the in ut and output ports at two sides thereof;

a refractor positioned between th input and output ports; and

a rotatable mechanism mounted n the holder and being rotatable about an axis perpendicular to an opt al axis of the input port, said refractor being fixed on the rotatable me hanism.

Claim 11 (new): The variable ptical attenuator as claimed in claim 10, wherein the rotatable mech: ism has a fixing block and a rotatable post extending from a bottom o the fixing block.

Claim 12 (new): The variable ptical attenuator as claimed in claim 11, wherein the fixing block of he rotatable mechanism has a groove defined in a center of a top surfac thereof, for fixing the refractor.

Claim 13 (new): The variable (tical attenuator as claimed in claim 12, wherein the holder has a base nd two side walls respectively perpendicularly extending from two side of the base, and each side wall has a mounting hole defined therethroug for fixing the input port or the output port.

Claim 14 (new): The variable c tical attenuator as claimed in claim 13, wherein a center hole is defi ed in a center of the base for

mating with the rotatable post of the rotat[illegible]le mechanism.

Claim 15 (new): The variable o[illegible]ical attenuator as claimed in claim 14, wherein the refractor has anti-r[illegible]lective coatings covering two surfaces which respectively face the input [illegible]d output ports.